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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,699	10/20/2000	Kiyoshi Ueyoko	0229-0612P	7541

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EXAMINER

FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 12/19/2001

6

Please find below and/or attached an Office communication concerning this application or proceeding.

A-S-6

Office Action Summary	Application No. 09/692,699	Applicant(s) UEYOKO, KIYOSHI	
	Examiner Justin R Fischer	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on October 21, 1999. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 3, and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Ushikubo (US 4,917,164). Regarding claim 1, as best depicted in Figure 1, the reference clearly defines the following features of the claimed invention: a tread portion, a pair of sidewall portions, a pair of bead portions, a carcass ply of cords extending between bead assemblies and having turnup portions that adjoin the main portion above the bead assembly, and a sidewall / bead configuration having the claimed curvature and dimensions. The examiner has pointed out the key tire elements, including the first and second substantially linear portions, in Figure 1 of the reference. In this instance, the second linear portion is disposed at angle that is approximately 20° with respect to the equatorial plane of the tire and both of the carcass turnup portions (41) are within a distance 2 times (gt) from the point Q, as defined by the claimed invention.

With respect to claim 2, it is evident from Figure 1 that point P is located at a height that is slightly greater than $H/6$ and significantly less than $H/5$, thus suggesting a location that falls directly in the middle of the range defined by the claimed invention.

Regarding claims 3 and 12, it is evident from Figure 1 that the first linear portion extends over a large portion of the radial height designated as $H/2$, thus suggesting a length that falls directly in the middle of the range defined by the claimed invention. Also, it is apparent that the second linear portion extends from nearly the rim heel line to slightly above the radial height designated as $H/6$, which suggests a length for the second linear portion that is extremely close to $H/6$ and well within the range of 0.05-0.5 times the section height defined by the claimed invention.

4. Claims 1-4, 7, and 9-13 rejected under 35 U.S.C. 102(b) as being anticipated by Ueyoko (US 5,772,811). Regarding claim 1, as best depicted in Figure 1, Ueyoko teaches the manufacture of pneumatic tires comprising: a tread portion, a pair of sidewall portions, a pair of bead portions, a carcass ply of cords extending between bead assemblies and having turnup portions that adjoin the main portion above the bead assembly, and a sidewall / bead configuration having the claimed curvature and dimensions. The examiner has pointed out the key tire elements, including the first and second substantially linear portions, in Figure 1 of the reference. In this instance, the second linear portion is disposed at angle that is approximately 16° with respect to the equatorial plane of the tire and the carcass turnup portions (5b) is within a distance 1 times (gt) from the point Q, as defined by the claimed invention.

With respect to claims 2 and 10, Ueyoko does not specifically compare the section height with the height of point P. In any event, the reference does suggest that

the height H_9 is between 0.1 and 0.3 times the height h_k , measured as the height to the radially outer portion of the carcass along the equatorial plane. Therefore, since the point P is slightly above the height h_9 and below the height of the maximum section width, it is quite evident that the point P necessarily extends between the broad range of 0.15-0.4 times the section height.

Regarding claims 3, 11, and 12, Figure 1 of Ueyoko clearly suggests that the first and second substantially linear portions have lengths that fall within the ranges of the claimed invention.

With respect to claim 4, Ueyoko defines a third linear section that is substantially parallel to the tire equatorial plane, as described by the examiner in Figure 1 of the reference.

With respect to claims 7 and 13, as previously noted, the apex height is suggested to range between 10 and 30% of the carcass height along the equatorial plane, which suggests an apex height that almost directly correlates with the range of the claimed invention since the section height is slightly larger than said carcass height.

Regarding claim 9, applicant has included all the limitations of claim 1 and further required that a third, substantially straight section extend from the radially inner end of the second linear portion to the vicinity of the bead heel. As described above and depicted in Figure 1 of Ueyoko, all three substantially linear sections are suggested by the reference in accordance to the limitations of the claimed invention.

5. Claims 1, 7, and 8 rejected under 35 U.S.C. 102(b) as being anticipated by Madec (US 4,446,902). Regarding claim 1, as best depicted in Figure 2, Madec is directed to the manufacture of radial tires having the following features of the claimed

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invention: a tread portion, a pair of sidewall portions, a pair of bead portions, a carcass ply of cords extending between bead assemblies and having turnup portions that adjoin the main portion above the bead assembly, and a sidewall / bead configuration having the claimed curvature and dimensions. The examiner has pointed out the key tire elements, including the first and second substantially linear portions, in Figure 2 of the reference. In this instance, the second linear portion is disposed at angle that is approximately 40° with respect to the equatorial plane of the tire and the carcass turnup portions (5b) is within a distance 2 times (gt) from the point Q, as defined by the claimed invention.

With respect to claim 7, Figure 2 of the reference suggests a ratio between the apex height and section height that is approximately 20%, which falls almost directly in the middle of the applicant's range.

With respect to claim 8, it is clearly evident that the first and second substantially linear portions are slightly curved concavely.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Ushikubo or Madec. As mentioned above, Ushikubo and Madec clearly depict all the structural limitations of independent claim 1. However, the references are completely

silent with respect to the distance between carcass cords in the main portion and the turnup portion (in adjoining region). In any event, the broad range suggested by the claimed invention is extremely well known and conventional, such that one of ordinary skill in the art at the time of the invention would have found such a design to be obvious, as set forth below.

With respect to claim 5, Figure 1 of Ushikubo and Figure 2 of Madec depict the carcass turnup portions as being disposed against one another. Therefore, the distance between the cords in the main carcass portion and the turnup portion is defined only by a portion of the topping rubber in each section (i.e. there are no distinct rubber layers or additional inserts / plies separating the sections). Thus, the distance between relevant cords is necessarily between the extremely broad range of 0.15 to 7.0 times the carcass cord diameter because the thickness of the topping rubbers will be within this range. Furthermore, the distance between the carcass cords of the main portion and the turnup portion in each adjoining part is substantially constant, as depicted in Figures 1 and 2, respectively (i.e. the plies do not flare out or otherwise create a noticeable increase/decrease in separation).

8. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyoko. As previously stated, the reference clearly defines all the limitations of the claimed invention outlined in the independent claim. However, the reference does not expressly describe the carcass cord spacing in the adjoining region. In any event, it is quite evident from Figure 1 of Ueyoko that the cord spacing in the adjoining portion increases gradually to the radially outer end of said adjoining portion. Furthermore, the claimed

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cord spacing defines an extremely broad and conventional range that one of ordinary skill in the art at the time of the invention would have found obvious, as set forth below.

In this instance, a thin rubber layer having a thickness below 1.6 mm separates the carcass main portion and turnup portion. Therefore, the combination of topping rubber and a thin rubber layer separate the carcass cords in the adjoining region. It is the examiner's position that the cord-cord distance in this region would necessarily be within the broad and conventional range suggested by applicant unless the topping rubber was extremely large, in which case one would expect a description or reason to support such an unconventional design. Thus, one of ordinary skill in the art at the time of the invention would have readily appreciated and expected such a design because, not only does the claimed invention define a conventional and well-known structure, but also Ueyoko appears to suggest the aforementioned cord spacing in the referenced drawings.

9. Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Ushikubo. As mentioned above, Ushikubo suggests all the limitations of the claim invention in independent claim 1. However, the reference is completely silent with respect to the radial extent of the bead apex. In any event, applicant has defined an extremely broad range of between 6 and 31% of the section height for the radial extent of the bead apex, which one of ordinary skill in the art at the time of the invention would have readily appreciated and expected since these values represent the well known and conventional design used in a variety of tires. Furthermore, though the reference appears to depict a bead apex height that is roughly between $H/6$ and $H/2$, it is readily understood in the tire industry that the bead apex can extend over a variety of distances

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in the bead region, with the figure of Ushikubo only being exemplary since the reference does not expressly restrict the apex height. Thus, the range for the apex height suggested by the claimed invention ultimately defines a conventional bead configuration that one of ordinary skill in the art at the time of the invention would have readily appreciated and expected.


Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(703) 605-4397**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Justin Fischer


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700

December 11, 2001